

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

Hideki Fukano

Date: December 4, 2001

Serial No.: Not Yet Known

Group Art Unit: --

Filed: Herewith

Examiner: --

For: SEMICONDUCTOR PHOTO-DETECTOR, SEMICONDUCTOR PHOTO-  
DETECTION DEVICE, AND PRODUCTION METHODS THEREOF-----  
Assistant Commissioner for Patents  
Washington, D.C. 20231**PRELIMINARY AMENDMENT**

Sir:

Preliminary to the examination of the above application, please amend the above-entitled  
patent application as follows.**FEE CALCULATION**

Any additional fee required has been calculated as follows:

\_\_\_\_\_ If checked, "Small Entity" status is claimed.

	NO. CLAIMS AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR		EXTRA PRESENT		RATE	ADDIT. FEE
TOTAL	16	MINUS	20	* =	0	X	(\$9 SE or \$18)	\$-0-
INDEP.	7	MINUS	7	** =	0	X	(\$42 SE or \$84)	\$-0-
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM						X	(\$140 SE or \$280)	\$

\* not less than 20 \*\* not less than 3

TOTAL \$ -0-

If any additional payment is required, a check which includes the calculated fee of \$ \_\_\_\_\_  
(OFGS Check No. \_\_\_\_\_) is attached.In the event the actual fee is greater than the payment submitted or is inadvertently not  
enclosed or if any additional fee during the prosecution of this application is not paid, the Patent  
Office is authorized to charge the underpayment to Deposit Account No. 15-0700.

### CONTINGENT EXTENSION REQUEST

If this communication is filed after the shortened statutory time period had elapsed and no separate Petition is enclosed, the Commissioner of Patents and Trademarks is petitioned, under 37 C.F.R. § 1.136(a), to extend the time for filing a response to the outstanding Office Action by the number of months which will avoid abandonment under 37 C.F.R. § 1.135. The fee under 37 C.F.R. § 1.17 should be charged to our Deposit Account No. 15-0700.

### AMENDMENTS

  X   If checked, amendment(s) to the specification and/or claims are submitted herewith.

#### **Specification:**

Please add the section beginning at page 1, line 2 (after the title) pursuant to 37 C.F.R. § 1.121(b)(ii) attached hereto as Appendix A. Entry is respectfully requested.

#### **Claims:**

Please cancel claim 1 without prejudice.

Please amend claim 7 and add new claims 16 and 17 pursuant to 37 C.F.R. § 1.121(c)(i) as set forth in the "clean" version attached hereto as Appendix A. Entry is respectfully requested. A version with markings to show the changes made pursuant to 37 C.F.R. § 1.121(c)(ii) is attached hereto as Appendix B.

       If checked, the optional complete set of "clean" claims pursuant to 37 C.F.R. § 1.121(c)(3) is attached hereto as Appendix C.

REMARKS

In view of the foregoing amendments, Applicant respectfully requests favorable consideration and early passage to issue of the present application.

EXPRESS MAIL CERTIFICATE

Respectfully submitted,

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail Post Office to Addressee (label #EL924389871US) in an envelope addressed to: U.S. Patent and Trademark Office, P.O. Box 2327, Arlington, VA 22202, on December 4, 2001:

Tamika Sumpter

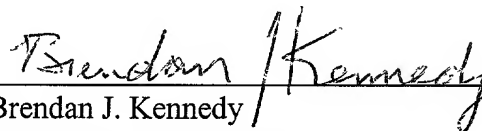
Name of Person Mailing Correspondence



Signature

December 4, 2001

Date of Signature



Brendan J. Kennedy

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**APPENDIX A**  
**“Clean” Version of Each Paragraph/Section/Claim**  
**37 C.F.R. § 1.121(b)(ii) and (c)(i)**

**SPECIFICATION:**

**New section beginning at page 1, line 2 (after the title):**

**CROSS REFERENCE TO RELATED APPLICATIONS**

This is a divisional of U.S. Patent Application Serial No. 09/184,218, filed November 2, 1998 in the name of Hideki Fukano and entitled SEMICONDUCTOR PHOTO-DETECTOR, SEMICONDUCTOR PHOTODETECTION DEVICE, AND PRODUCTION METHODS THEREOF.

**CLAIMS:**

7. (Amended) The semiconductor photo-detector as claimed in claim 4, wherein a compositionally graded or step-graded layer from the same composition as said photo-absorption layer to the same composition as said semiconductor layer of large schottky-barrier height is disposed between said photo-absorption layer and said semiconductor layer of large schottky-barrier height.

16. (NEW) The semiconductor photo-detector as claimed in claim 5, wherein a compositionally graded or step-graded layer from the same composition as said photo-absorption layer to the same composition as said semiconductor layer of large schottky-barrier height is disposed between said photo-absorption layer and said semiconductor layer of large schottky-barrier height.

17. (NEW) The semiconductor photo-detector as claimed in claim 6, wherein a compositionally graded or step-graded layer from the same composition as said photo-absorption layer to the same composition as said semiconductor layer of large schottky-barrier height is disposed between said photo-absorption layer and said semiconductor layer of large schottky-barrier height.

**APPENDIX B**  
**Version with Markings to Show Changes Made**  
**37 C.F.R. § 1.121(b)(iii) and (c)(ii)**

**CLAIMS:**

7. (Amended) The semiconductor photo-detector [of as claimed in any one of Claims 4, 5 and 6] as claimed in claim 4, wherein a compositionally graded or step-graded layer from the same composition as said photo-absorption layer to the same composition as said semiconductor layer of large schottky-barrier height is disposed between said photo-absorption layer and said semiconductor layer of large schottky-barrier height.

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